U.S. Department
of Transportation

**United States
Coast Guard**

PREVENTION OF BLOODBORNE PATHOGEN TRANSMISSION (BBP)

COMDTINST M6220.8

U.S. Department of Transportation

United States Coast Guard

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COMDTINST M6220.8

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COMMANDANT INSTRUCTION M6220.8

Subj: PREVENTION OF BLOODBORNE PATHOGEN TRANSMISSION

Ref: (a) 29 CFR 1910.1030, OSHA Bloodborne Pathogens Standard, (NOTAL)
(b) COMDTINST M6000.1(series), Medical Manual

1. PURPOSE. To provide guidance and information on the prevention and control of diseases caused by bloodborne pathogens (BBP).

2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, Commander, and Coast Guard Activities Europe shall ensure dissemination and compliance with the provisions of this manual.

3. DIRECTIVES AFFECTED. Commandant Instruction 6230.7, Vaccine Against Hepatitis B Virus, is canceled.

4. DISCUSSION. Bloodborne pathogens are infectious organisms. Examples of bloodborne pathogens include the human immunodeficiency virus (HIV) and hepatitis B virus (HBV) whose primary means of transmission is through blood and/or other body fluids. Reference (a) prescribes measures to protect personnel against these hazards and reference (b) applies these measures to the Coast Guard health services community.

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5. SCOPE. Provisions of this manual apply to all Coast Guard personnel with specific requirements for select members based on their risk of exposure to human blood, as identified in chapter 1.

6. RESPONSIBILITIES.

   a. Commanding officers or officers-in-charge shall follow the guidance of chapter 1 to determine the exposure category of unit personnel and shall ensure that the appropriate preventive measures are implemented.

   b. Commanders, Maintenance and Logistics Commands (k) shall:

      (1) Assist units with the selection and use of personal protective equipment;

      (2) Assist units with training; and

      (3) Provide other assistance as appropriate.

7. FORMS/REPORTS. None

ALAN M. STEINMAN
Chief, Office of Health and Safety

RECORD OF CHANGES

Change Number	Date of Change	Date Entered	Entered by:

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CHAPTER 1. INTRODUCTION

A. **Background**. Blood, other body fluids e.g., semen, cerebral spinal fluids, vaginal secretions, or fluids contaminated with blood, can be sources of bloodborne pathogens. Transmission of diseases caused by bloodborne pathogens can be prevented and controlled. Guidance provided in this manual will minimize both the risk of bloodborne pathogen exposure and the development of disease secondary to any inadvertent contact with blood and body fluids. Guidance was developed in accordance with the recommendations of the Centers for Disease Control and Prevention (CDC) and reference (a).

B. **Definitions**.

1. Bloodborne Pathogens. Bloodborne pathogens are defined as pathogenic microorganisms present in human blood which can cause disease in humans. These bloodborne pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV). Other potentially infectious materials are defined as the additional types of body fluids and tissues, besides blood, which are potentially capable of transmitting pathogen disease.

   a. Reference (a) specifically defines other potentially infectious materials to include:

      (1) Semen;

      (2) Vaginal secretions;

      (3) Fluids from internal body spaces (e.g., spinal fluid or joint fluid);

      (4) Any other body fluid visibly contaminated with blood;

      (5) All body fluids where it is difficult or impossible to differentiate between body fluids; and

      (6) Any human tissues other than intact skin (unless the tissue has been fixed by histology procedures) and tissue culture.

   b. Reference (a) does not specifically include tears, vomitus, urine, or feces unless visibly contaminated with blood. However, a number of serious human diseases can be transmitted by urine, feces, etc., even in the absence of blood. While such transmissions are not covered by the standard unless contaminated with blood, they should be regarded as

potentially dangerous, and the same precautions should be used as when dealing with blood and the other potentially infectious material specifically mentioned in the standard. For disposal purposes, tears, vomit, urine, and feces must be treated as potentially hazardous materials.

2. Engineering Controls. Measures to isolate or remove the bloodborne pathogens from the workplace. These include special containers for disposal of contaminated needles or self-sheathing needles.

3. Exposure Incident. Contact of blood or other potentially infectious materials with a person's eye, mouth, other mucous membranes, non-intact skin, or by parenteral contact (e.g., by a puncture wound or cut with a contaminated object such as a hypodermic needle).

4. Personal Protective Equipment. Items an individual may use to prevent contamination by infectious material. In the case of bloodborne pathogens, such personal protective equipment includes gloves, eye protection, face shields, masks covering the mouth, and protective clothing.

5. Sharps. Sharp items which become contaminated with infectious materials. Sharps include all hypodermic needles, scalpel blades, and other sharp instruments. These items must be considered infectious and handled with extreme care to prevent injuries.

6. Security Personnel. Personnel assigned ashore as full time "police," consisting of designated persons who are specifically organized, trained, and equipped to provide physical security and law enforcement for the unit.

C. <u>Summary of Prevention and Control Measures</u>. Essential elements of the prevention and control of diseases caused by bloodborne pathogens include:

1. Training and Education. Means by which workers are made more aware of the nature of bloodborne pathogens, activities that place them at-risk, and means to prevent disease transmission.

2. Engineering Controls. Means by which to prevent, isolate or remove bloodborne pathogenss e.g., biohazard disposal from the workplace.

3. Personal Protective Measures. Include the principles of "universal precautions" and immunization of appropriately identified members against hepatitis B. Universal precautions basically mean that all blood and/or body fluids are considered potentially infectious and require

workers to undertake protective procedures. Protective procedures are multifaceted and staged, dependent on the nature and magnitude of exposure. Procedures include the wearing of puncture resistant gloves by all personnel in situations when blood and/or body fluids are present.

4. Medical management of exposed personnel including provision for post-exposure management of personnel who contact infectious blood and/or body fluids.

D. **Applicability of Prevention and Control Measures.** Coast Guard missions such as boating safety, search and rescue, and maritime law enforcement are such that personnel may be exposed to human blood and body fluids. A comprehensive program for the prevention and control of disease related to blood and body fluid exposure requires all members to have a general sense of awareness of bloodborne pathogens. Some Coast Guard members require specific prevention and control measures based on the magnitude and intensity of their exposure.

E. **At-Risk Activities and Personnel.**

1. The degree of risk and probability of disease transmission are difficult to quantify but are related to the frequency, nature, and magnitude of exposure. Persons who have infrequent exposure to small quantities of blood and/or body fluids are at significantly lower risk of disease transmission compared to persons frequently exposed to large quantities.

2. Personnel who, as part of their normal work activities, are at increased risk of disease due to bloodborne pathogen exposure are:

   a. Health Services Personnel;

   b. Emergency Medical Technicians (EMTs);

   c. Security Personnel; and

   d. Firefighters.

CHAPTER 2. HEPATITIS B VACCINATION AND POST-EXPOSURE PROPHYLAXIS

A. Introduction. Hepatitis B is a viral infection caused by the hepatitis B virus (HBV). Although the disease primarily affects the liver, multiple organ systems can be involved. Infections with HBV are generally acute and self-limiting with most patients experiencing full recovery. Hepatitis B can be severely debilitating and result in chronic disease, HBV carrier state, and increased risk for liver cancer. The majority of HBV infections are due to prebirth transmission, sexual contact with an infected person (both homosexual and heterosexual), injection by a needle contaminated with serum or plasma, or transfusion of infective blood or blood products. Hepatitis B infections can result from other means e.g., contact of broken skin and mucous membranes. However, based on the estimated number of exposures and the number of known cases, the risk of HBV transmission by these means is small.

B. Vaccination Policy.

1. Personnel Indicated for Vaccination. Immunization for hepatitis B is very effective in preventing this disease but is only one part of an overall program of prevention and control. Hepatitis B immunization is indicated for those persons considered to be at increased risk for disease as described below.

   a. Vaccination Mandatory. Hepatitis B immunization is mandatory for all health services personnel except as noted below, and for in-house contract providers who perform invasive procedures. Civilian administrative personnel, and E-8 and E-9 Health Services Technicians filling administrative positions, are exempt; however, these personnel are encouraged to receive hepatitis B vaccination.

   b. Vaccination Recommended. While not mandatory, hepatitis B immunization is strongly recommended for EMTs, security personnel, firefighters, and HSs not involved in direct patient care. Personnel in exempt categories must be aware that their activities can place them at risk for HBV transmission.

   c. Vaccination Not Recommended. Personnel such as members of boarding crews or helicopter search and rescue flight crews periodically are in situations where there is exposure to blood or body fluids. The frequency, magnitude, and nature of these exposures, however, are highly varied and the exposures are insufficient for across-the-board immunization. See paragraph 2-B-3 for exceptions which warrant vaccination of other Coast Guard personnel.

2. Administrative Procedures.

   a. Coast Guard EMTs and HS "A" School students shall receive instruction regarding the risk of hepatitis B as part of the curriculum.

   b. Coast Guard security personnel and firefighters shall receive instruction upon reporting to their work site.

   c. EMT students, security personnel, and firefighters shall make an informed decision about their exposure and opportunity for hepatitis B immunization.

   d. EMT students, security personnel, and firefighters shall sign an entry on the Chronological Record of Medical Care (SF-600) entry as described in enclosure 1.

   e. EMT students electing to be immunized shall do so upon return to their duty station.

   f. HS "A" School students shall receive the first dose of the vaccine upon completion of the EMT curriculum, and the second dose one month later. The HS's unit shall administer the last (third) dose.

   g. Security personnel and firefighters shall receive the vaccine at their unit.

   h. All vaccine administration shall be documented on the Immunization Record (SF-601) and on the International Certificate of Vaccination (PHS-731).

   i. Training requirements are specified in chapter 5 of this manual.

3. Vaccination Of Other Coast Guard Personnel. There may be members at a unit, while not EMTs, health services personnel, security personnel or firefighters who have clinically significant exposures to blood and body fluids which warrant hepatitis B vaccination. Medical authority may recommend hepatitis B vaccination for such personnel when deemed appropriate. Recommendation for vaccination must be made on a person by person basis and not for whole groups of persons such as all members assigned to a given unit.

4. Vaccine Dosing. Recombivax (NSN 6505-01-266-3780) is the vaccine that should be used due to availability. Hepatitis B vaccine administration must be consistent with recommendations of the Advisory Committee for Immunization Practices (ACIP). Summary guidelines for adult hepatitis B immunization are provided in enclosure (2).

C. **Post-exposure Prophylaxis**

1. Post-exposure prophylaxis for hepatitis B is a highly effective means of preventing this disease due to exposure to infectious blood or body fluids. Post-exposure prophylaxis is achieved through administration of hepatitis B immune globulin (HBIG) and hepatitis B vaccine as outlined in enclosure (2).(HBIG is not effective for the prevention of HIV.)

2. Post-exposure prophylaxis should be considered whenever there is exposure to blood or body fluids considered by medical authority to be of a nature to place the exposed person at clinically significant risk for disease. The sole presence of blood on intact skin does not place the exposed person at risk for hepatitis B transmission. Commanders, Maintenance and Logistics Commands, Health and Safety Division (k), and Commandant (G-KOM) can be contacted for guidance. Factors important in the assessment of clinically significant exposure include:

   a. The frequency of exposure events;

   b. The volume of blood and/or body fluids;

   c. Whether exposure was by injection or permucosal;

   d. The presence of non-intact skin (e.g., broken, abraded, or cut skin);

   e. The hepatitis B vaccination status of the exposed person; and

   f. The likelihood that the blood source is infectious.

CHAPTER 3. METHODS OF CONTROL

A. **Introduction**. Engineering and work practice controls shall be used to eliminate or minimize employee exposure to bloodborne pathogens. Where occupational exposure remains after institution of these controls, personal protective equipment shall be used.

B. **Approved General Work Practices**.

1. Universal Precautions. Universal precautions shall be used by all members whenever the potential for exposure to bloodborne pathogens exists. Members shall adhere rigorously to the infection control precautions noted in this chapter to minimize the risk of exposure to all blood and other body fluids. All body fluids shall be considered infectious materials.

   a. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets, or on counters where blood or other potentially infectious materials are present. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited where there is a possibility of occupational exposure to bloodborne pathogens.

   b. Gloves are to be worn when it is anticipated that a member's hands may be in contact with blood or other potentially infectious materials, including touching contaminated items or surfaces. Gloves shall be located at appropriate sites for easy access. Hands shall be washed thoroughly and immediately after possible contact with blood and/or body fluids, as well as before putting on and taking off the gloves. Gloves must fit properly and be latex or vinyl. In a health care setting the gloves should be changed each time a new patient is being dealt with. Gloves contaminated with blood or body fluids must be changed and disposed of as noted below. Masks, eye protection, or face shields shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated. Gowns and coveralls shall be worn in occupational exposure situations. Once contaminated, the gowns and coveralls shall be treated as contaminated materials and handled as stated later in this chapter. Plastic and rubberized aprons should be cleaned first by rinsing with soap and water and then disinfected using a solution (as noted in 4.f.(1) below) or similar disinfectant recommended by the manufacturer.

2. Use of Resuscitation (CPR) Equipment. Pocket masks and resuscitation bags shall be used where emergency mouth-to-mouth resuscitation is indicated.

3. Handling Contaminated Linen.

   a. Although soiled linens are a source of large numbers of certain pathogenic microorganisms, the risk of actual disease transmission by them is negligible.

   b. Rather than rigid procedures and specifications, hygienic and common-sense storage and processing of clean and soiled linen are recommended.

      (1) Soiled linen must be handled as little as possible and with minimum agitation. (Gloves are encouraged.)

      (2) All soiled linen will be bagged at the location where it was used; it will not be sorted or rinsed in patient care areas.

      (3) Linen soiled with blood or body fluids will be placed and transported in bags that prevent leakage.

      (4) Normal laundry cycles will be used according to the washer and detergent manufacturers' recommendations. Linen should be checked for sharps.

4. Cleaning Blood and/or Body Fluid Spills. All spills of blood and or blood contaminated fluids will be promptly cleaned using the below methods.

   a. Personnel must wear gloves.

   b. Visible material will first be removed with disposable towels or other appropriate means, ensuring against direct contact with blood.

   c. If splashing is anticipated, protective eyewear will be worn along with an impervious gown or apron which provides an effective barrier to splashes.

   d. Wash hands following the removal of gloves. Soiled cleaning equipment will be cleaned and decontaminated or placed in an appropriate container and disposed of according to clinic policy or unit HAZMAT officer.

   e. Plastic bags clearly labeled as containing infectious waste will be available for removal of contaminated items from the site of the spill.

   f. The area will be decontaminated with a disinfection solution or an appropriate EPA-approved germicide listed below.

(1) Recommended disinfectants.

(a) Phenolic Compounds. In high concentrations, phenolics are protoplasmic poisons. In low concentrations, they inactivate essential enzyme systems. As disinfectants, phenolics are usually combined with a detergent. They are non-abrasive to treated surfaces. Disinfection can be achieved after 10-20 minutes of contact.

(b) Sodium Hypochlorite. Sodium hypochlorite is thought to oxidize microbial enzymes and cell wall components. A 1:10 dilution of 5.25 percent sodium hypochlorite in water yields a solution which can provide an intermediate level of disinfection in 10 minutes. Since sodium hypochlorite solution tends to be unstable, a fresh solution must be prepared daily. It possesses a strong odor and can be harmful to eyes, skin, clothing, upholstery, and metals (especially aluminum).

NOTE: Above disinfectants are authorized for use on aircraft when properly diluted. Because these disinfectants are available in various concentrations, check container or enclosed literature for proper dilution.

(2). Disinfectants not recommended for use.

(a) Alcohol. Alcohol is bactericidal against vegetative forms of bacteria through the denaturation of cellular proteins. A 70-90 percent solution (diluted with water) is more effective than a more concentrated solution. The disadvantages of alcohol use are:

1 Evaporation;

2 Lack of sporicidal or viricidal activity; and

3 Rapid inactivation by organic material.

(b) Quaternary Ammonium Compounds. Benzalkonium chlorides and other "quats" have been used as disinfectants because they were thought to be safe, inexpensive, and to have low surface tension. Their biocidal activity results in a breakdown of the bacterial cell membrane producing an altered cellular permeability. As a group, these compounds

have some serious deficiencies. Being positively charged, they are attracted to not only bacteria but also to glass, cotton and proteins. This decreases their biocidal activity. The negatively charged ions of common cleaners, soaps and other compounds will also neutralize "quats." Some "quats" have been shown to support the growth of gram-negative organisms. They are ineffective against most spore formers, the hepatitis B virus, and the tubercle bacillus.

5. Handling Infected Medical Wastes. There is no epidemiologic evidence to suggest that most medical waste is any more infectious than residential waste. However, the public concern about the risk of medical waste must not be ignored. It is necessary to identify waste for which special precautions are indicated.

   a. The most practical approach to the management of infectious waste is to identify waste with the potential for causing infection during handling and disposal, and for which special precautions appear prudent.

      (1) Medical waste for which special precautions appear prudent include sharps, microbiological laboratory waste, pathology waste, and blood specimens or blood products.

      (2) Materials containing small amounts of blood, saliva, or other secretions, e.g., tainted gauze pads, sanitary napkins or facial tissues, are considered infectious waste.

   b. Infectious waste, in general, will be autoclaved or incinerated or otherwise treated to render the waste noninfectious.

   c. Infectious waste autoclaving standards are different from normal sterilization standards. Bulk blood, suctioned fluids, excretions, and secretions may be carefully poured down a drain connected to a sanitary sewer. Sanitary sewers may also be used to dispose of other infectious wastes capable of being ground and flushed into the sewer where permitted. (Verify with HAZMAT officer or engineering officer.)

   d. Biohazard warning labels shall be affixed to containers of regulated waste, refrigerators, and freezers containing blood or other potentially infectious material, and other containers used to store, transport, or ship blood or other potentially infectious materials with the following exceptions:

(1) Red bags may be substituted for labels on bags or containers of regulated waste. Chapter 5 of this manual requires that personnel be trained to understand the meaning of all color coding.

(2) Individual containers of blood or other potentially infectious materials may be placed in a labeled container during storage, transport, shipment or disposal. Handling suspected waste shall be done in accordance with article 13.K.12 (Infectious Waste) of reference b.

e. All clinics are considered hazardous waste generators. Each health care facility must have a written protocol for the management of infectious waste which is consistent with this manual, Federal, state, and local regulations.

f. Units are required to maintain tracking documents that contain information concerning the type of infectious waste, quantity, name and phone number of unit POC, name, address and phone number of hauler/disposal facility, and date. Information must be kept for not less than five years.

CHAPTER 4. REPORTING EXPOSURE INCIDENTS

A. **Definition Of Exposure Incident**. "Exposure Incident" refers to a specific eye, mouth, other mucous membranes, non-intact skin, or parenteral contact with blood or other potentially infectious material.

B. **What To Do If An Incident Occurs**.

1. An exposure has occurred when a member comes in contact with blood or other body fluids in the following ways:

   a. Through a needle stick or cut;

   b. From a splash to the eye or mouth; or

   c. Having contact with large amounts of blood, or prolonged contact with blood when the member exposed skin is chapped, abraded, or afflicted with dermatitis.

2. All exposures shall be reported by the individual to their immediate supervisor, who will document the incident via memorandum to the Chief, Health Services Division or health services department head. (Units without HSs shall contact the nearest clinic for direction.)

   a. This memorandum will detail time, date, circumstances of the exposure, and any medical treatment received.

   b. A copy will be provided to the exposed individual.

   c. A copy will be retained by the clinic's Quality Assurance coordinator or his/her designee, who shall ensure all required follow-up treatment and testing is documented.

   d. The Chief, Health Services Division or health services department head shall ensure the following management protocol is followed.

      (1) Attempt to obtain consent from the source individual and draw a blood sample;

      (2) Test the blood sample for Hepatitis B Surface Antigen (HBsAG) and Human Immunodeficiency Virus (HIV) antibody. Take the following actions:

         (a) Contact the nearest Coast Guard legal office regarding consent for testing non-active duty source individuals and incompetent and/or unconscious individuals.

(b) Test the source individual at a location where appropriate pretest counseling is available.

(c) Reasonable attempts may not result in timely determination of HBsAG or HIV status of source person. In these circumstances procedure for post exposure prophylaxis for hepatitis B should be followed as outlined in enclosure (2).

(3) Provide post test counseling and referral for treatment; and

(4) Make source individual's test results available to the exposed employee;

(a) The employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

(b) Provide to all individuals who seek consultation for any HIV-related concerns appropriate counseling from a USMTF or other medical facility capable of providing this service.

3. All clinics shall ensure that the health care professional evaluating an employee after an exposure incident is provided the following information:

a. A copy of reference (a);

b. A description of the exposed employee's duties as they relate to the exposure incident;

c. Documentation of the route(s) of exposure and circumstances under which exposure occurred; and

d. Result of the source individual's blood testing, if available, and all records relevant to the appropriate treatment of the employee, including vaccination.

4. The senior medical officer shall obtain, and provide the exposed individual with a copy of, the evaluating health care professional's written opinion within 15 days of the completion of the evaluation.

CHAPTER 5. TRAINING

A. **General Training Requirements**. Reference (a) requires initial training with annual updates for personnel who are at risk for bloodborne pathogen exposure. As described in chapter 1 on exposure determination, personnel are classified in terms of their BBP exposure risk based on their specific job/task assignments. Therefore, two levels of training will occur.

B. **Specific Levels of Training**.

1. Level I training shall be provided to personnel defined in chapter 1 as at increased risk of disease due to exposure to bloodborne pathogens. Training should be provided by health services personnel and comply with reference (a). Individuals should:

   a. Receive training upon assignment with annual refresher;

   b. Be provided with or have access to a copy of reference (a);

   c. Be given a general discussion on:

      (1) Bloodborne diseases and their transmission;

      (2) Exposure control plan;

      (3) Engineering and workplace controls;

      (4) Personal protective equipment;

      (5) Hepatitis B vaccine;

      (6) Response to emergencies involving blood;

      (7) How to handle exposure incidents;

      (8) Post-exposure evaluation and follow-up program; and

      (9) Signs/labels/color-coding.

   d. Be afforded a questions and answers session.

2. Level II training shall be provided to those individuals, who (due to the nature of their jobs) may have an infrequent exposure to BBPs. It should be provided by a BBP trained HS or EMT with a script covering details and shall include:

   a. General explanation of BBPs;

   b. Explanation of transmission;

   c. Identify tasks and activities relevant to BBP involvement;

   d. Examples of personal protective equipment use and disposal to include hands-on practice;

   e. Information about hepatitis B vaccine;

   f. Appropriate action in the event of an exposure to blood;

   g. Procedure to follow in case of a spill or emergency;

   h. Explanation of signs, labels, and color coding; and

   i. An opportunity for questions and answers.

Enclosure 1 to COMTDINST M6220.

HEPATITIS B VACCINATION INFORMATION AND INFORMED CONSENT FORM

Individuals with an increased risk for exposure to bloodborne pathogens (article 1-E-2 above) in the Coast Guard must be concerned with exposure to human immunodeficiency virus (HIV); however, the risk of contracting other infectious diseases, such as hepatitis B virus (HBV), is much greater. HBV infection can result in physical debilitation. Once infected, an individual also poses a potential risk to future patients as a "carrier" of the HBV infection. Infection control practices which prevent the transmission of HBV will also prevent the transmission of HIV. A safe and effective vaccine to prevent hepatitis B has been available since 1982. Available vaccines stimulate active immunity against HBV infection and provide over 90 percent protection against the virus for seven or more years following vaccination. Hepatitis B vaccination will be offered to all personnel classified at risk. Personnel declining to receive HBV vaccination must sign the following statement on an SF-600, which shall be retained in the individual's health record:

"I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring and or becoming a carrier of hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me."

ADULT IMMUNIZATION FOR HEPATITIS B

Recombivax HB	OR	Engerix-B
dose in microgram (dose in mL) ages 11-19: 5 (0.5) ages ≥ 20: 10(1.0)		dose in microgram (dose in mL) all ages: 20 (1.0)

Both vaccines are recommended to be administered in a three dose series at 0, 1, and 6 months. Injections should be given in the deltoid muscle.

See enclosure (2) chart 2-1.

CHART 2-1 POST-EXPOSURE PROPHYLAXIS FOR HEPATITIS B FOLLOWING PERCUTANEOUS EXPOSURE

TREATMENT WHEN SOURCE IS FOUND TO BE:

Exposed Person	HBsAg Positive	HBsAg Negative	Unknown or Not Tested
Unvaccinated	Administer HBIGx1* and initiate hepatitis B vaccine	Initiate hepatitis B vaccine	Initiate hepatitis B vaccine
Previously vaccinated			
Known responder	Test exposed person for anti-HBs 1. if adequate, no treatment 2. if inadequate hepatitis B vaccine booster dose	No treatment	No treatment
Known non-responder	HBIG x 2 doses 1 month apart or; HBIG x 1 dose, plus 1 dose of hepatitis B vaccine	No treatment	If known high-risk sourse, may treat as if source were HBsAg positive
Response unknown	Test exposed person for anti-HBs** 1. if inadequate HBIG x 1 dose, plus hepatitis B vaccine booster dose 2. if adequate, no treatment	No treatment	Test exposed person for anti-HBs** 1. if inadequate, hepatitis B vaccine booster dose 2. if adequate, no treatment

* Hepatitis B immune globulin (HBIG) dose 0.06 mL/kg intramuscularly.

** Adequate anti-HBs is $\geq$10 milli-international units. Post-exposure prophylaxis should be initiated within 48 hours of exposure but still has been shown to be effective when initiated within seven days.

NOTE: Most situations typical of Coast Guard operations will be that the HBsAG status of the source is unknown. If the source person is highly suspected of being HBsAG positive, but true HBsAG status is unknown, consider administration of HBIG x 1 in addition to hepatitis B vaccination series.

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**United States
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